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| ABDALLA, KHALID M | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/579,484 | OGASAHARA ET AL. | |
| | Examiner | Art Unit | |
| | KHALID ABDALLA | 2419 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *21 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-113* is/are pending in the application.

4a) Of the above claim(s) *2,5-39,43-65,72-88 and 92-113* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,40-42,66-71 and 89-91* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :03/06/2007 and 08/02/2006 and 06/21/2006.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1,3-4,40-42 and 89-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebata et al (US 20020137459 A1) in view of Teruhi et al (20030072269 A1).

Regarding claim1 Ebata et al disclose a communication system (a multi-hop wireless communication network comprising a plurality of network nodes interconnected by a common wireless resource see [0008 lines 2-3 and Fig. 1)
in which three or more base nodes (Fig. 1 shows more than three base nodes 11-15)
the three or more base nodes (Fig. 1 shows more than three base nodes 11-15)
Ebata et al disclose all the subject matter of the claimed invention with exception of communicate through a plurality of communication media each formed of at least one relay node, wherein include an assuming unit which handles a plurality of ports connected to the plurality of communication media among ports belonging to the base node as one virtual port to assume the plurality of communication media to be one node.Teruhi et al communicate through a plurality of communication media each formed of at least one relay node (The data transmission control method according to the present invention which is used at the source node on the network to send therefrom

data to the destination node see [0009] lines 1-3 also FIG. 2 is a diagram showing connections of a multimedia data delivery system using the RTP/RTCP scheme between source and destination nodes see [0040] lines 3-4)

wherein include an assuming unit which handles a plurality of ports connected to the plurality of communication media among ports (Fig. 1 shows multiple ports see node 21 ) belonging to the base node as one virtual port to assume the plurality of communication media to be one node (the transmission unit, which sets up multiple communication routes from the source node to the destination node on the network and distributes and sends data, comprises: means for obtaining quality information on the multiple routes from the destination node; and distribution control means for adaptively changing data distribution ratios for the multiple routes on the basis of their quality information obtained by the quality information obtaining means see [0012] lines 1-7).

Thus it would have been obvious to one of ordinary skill in the art to implement the method of Teruhi et al in the system of Ebata et al .The method of Ebata et al can be implemented on any type of method communicate through a plurality of communication media each formed of at least one relay node, wherein include an assuming unit which handles a plurality of ports connected to the plurality of communication media among ports belonging to the base node as one virtual port to assume the plurality of communication media to be one node which is taught by Teruhi et al with a motivation in order to provide a data transmission control suitable for use to avoid network load concentration, transmission delay fluctuations due to traffic congestion.

Regarding claim3 Ebata et al disclose a communication system (a multi-hop wireless communication network comprising a plurality of network nodes interconnected by a common wireless resource see [0008 lines 2-3 and Fig. 1)

Ebata et al disclose all the subject matter of the claimed invention with the exception of , wherein the assuming unit includes a forwarding data base which registers, for one destination, a plurality of pieces of forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination Teruhi et al from the same or similar field of endeavor teach wherein the assuming unit includes a forwarding data base which registers, for one destination (the transmission unit, which sets up multiple communication routes from the source node see [0012] and FIG. 19B is a flowchart showing the procedure by which the destination node obtains information from the sender report see [0035]), a plurality of pieces of forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination (the transmission unit, which sets up multiple communication routes from the source node see [0012], also it is possible to specify port numbers by the UDP destination port number 52 in FIG. 7 according to the application used so that the router 21 outputs packets to the specified ports according to the individual destination port numbers 52 and Figs. 7 & 18). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Teruhi et al in the system of Ebata et al .The method of Ebata et al can be implemented on any type of method wherein the assuming unit includes a forwarding data base which registers, for one destination, a plurality of pieces of forwarding information for transferring a data frame transmitted

from a certain transmission source to a predetermined destination which is taught by Teruhi et al with a motivation in order to provide a data transmission control suitable for use to avoid network load concentration, transmission delay fluctuations due to traffic congestion.

Regarding claim4 Ebata et al disclose a communication system (a multi-hop wireless communication network comprising a plurality of network nodes interconnected by a common wireless resource see [0008 lines 2-3 and Fig. 1)

Ebata et al disclose all the subject matter of the claimed invention with the exception of wherein the assuming unit includes a port mapping table which correlates at least one port of the base node with one virtual port, and a forwarding data base which registers at least one the virtual port in forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination. Teruhi et al from the same or similar field of endeavor teach wherein the assuming unit includes a port mapping table which correlates at least one port of the base node with one virtual port (the destination node processes the received packets, regarding a set of multiple routes as a single virtual route. The route information thus obtained is inserted in RTCP-RR together with LSR and DLSR and sent to the source node
in step S2, see [0087] ) and a forwarding data base which registers at least one the virtual port in forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination (it is possible to specify port numbers by the UDP destination port number 52 in FIG. 7 according to the application used so that the router 21 outputs packets to the specified ports according to the

individual destination port numbers 52 and Figs. 7 & 18) Thus it would have been obvious to one of ordinary skill in the art to implement the method of Teruhi et al in the system of Ebata et al .The method of Ebata et al can be implemented on any type of method wherein the assuming unit includes a port mapping table which correlates at least one port of the base node with one virtual port, and a forwarding data base which registers at least one the virtual port in forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination which is taught by Teruhi et al with a motivation in order to provide a data transmission control suitable for use to avoid network load concentration, transmission delay fluctuations due to traffic congestion.

Regarding claim40 Ebata et al disclose, a node as a base communicating with each other (Fig. 1 shows base nodes 11-15) ports belonging to each of three or more nodes as a base as one virtual port to assume the plurality of communication media to be one node (Fig. 1 shows more than three base nodes 11-15 communicating with each other). Ebata et al disclose all the subject matter of the claimed invention with exception of through a plurality of communication media each formed of at least one relay node in a communication system, comprising an assuming unit which handles a plurality of ports connected to the plurality of communication media. Teruhi et al from the same or similar field of endeavor teach a plurality of communication media each formed of at least one relay node (The data transmission control method according to the present invention which is used at the source node on the network to send therefrom data to the destination node see [0009] lines 1-3 also FIG. 2 is a diagram showing connections of a

multimedia data delivery system using the RTP/RTCP scheme between source and destination nodes see [0040] lines 3-4) in a communication system, comprising an assuming unit which handles a plurality of ports connected to the plurality of communication media (the transmission unit, which sets up multiple communication routes from the source node to the destination node on the network and distributes and sends data, comprises: means for obtaining quality information on the multiple routes from the destination node; and distribution control means for adaptively changing data distribution ratios for the multiple routes on the basis of their quality information obtained by the quality information obtaining means see [0012] lines 1-7). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Teruhi et al in the system of Ebata et al .The method of Ebata et al can be implemented on any type of method a plurality of communication media each formed of at least one relay node in a communication system, comprising an assuming unit which handles a plurality of ports connected to the plurality of communication media which is taught by Teruhi et al with a motivation in order to provide a data transmission control suitable for use to avoid network load concentration, transmission delay fluctuations due to traffic congestion.

Regarding claim41 Ebata et al disclose the base (Fig. 1 shows base nodes 11-15), Ebata et al disclose all the subject matter of the claimed invention with exception of wherein the assuming unit includes a forwarding data base which registers, for one destination, a plurality of pieces of forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination .Teruhi et

al from the same or similar field of endeavor teach wherein the assuming unit includes a forwarding data base which registers, for one destination (the transmission unit, which sets up multiple communication routes from the source node see [0012] and FIG. 19B is a flowchart showing the procedure by which the destination node obtains information from the sender report see [0035]), a plurality of pieces of forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination (the transmission unit, which sets up multiple communication routes from the source node to the destination node on the network and distributes and sends data, comprises: means for obtaining quality information on the multiple routes from the destination node; and distribution control means for adaptively changing data distribution ratios for the multiple routes on the basis of their quality information obtained by the quality information obtaining means see [0012] lines 1-7) and (The source node 11 extracts the route quality information from RTCP-RR received from the destination node 12 see [0057] lines 1-2 and Fig. 2) Thus it would have been obvious to one of ordinary skill in the art to implement the method of Teruhi et al in the system of Ebata et al .The method of Ebata et al can be implemented on any type of method wherein the assuming unit includes a forwarding data base which registers, for one destination, a plurality of pieces of forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination which is taught by Teruhi et al with a motivation in order to provide a data transmission control suitable for use to avoid network load concentration, transmission delay fluctuations due to traffic congestion.

Regarding claim42 Ebata et al disclose the base (Fig. 1 shows base nodes 11-15), Ebata et al disclose all the subject matter of the claimed invention with exception of, wherein the assuming unit includes a port mapping table which correlates at least one port of the base node with one virtual port, and a forwarding data base which registers at least one the virtual port in forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination. Teruhi et al from the same or similar field of endeavor teach wherein the assuming unit includes a port mapping table which correlates at least one port of the base node with one virtual port (the destination node processes the received packets, regarding a set of multiple routes as a single virtual route. The route information thus obtained is inserted in RTCP-RR together with LSR and DLSR and sent to the source node in step S2, see [0087] ), and a forwarding data base which registers at least one the virtual port in forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination (the transmission unit, which sets up multiple communication routes from the source node see [0012], also it is possible to specify port numbers by the UDP destination port number 52 in FIG. 7 according to the application used so that the router 21 outputs packets to the specified ports according to the individual destination port numbers 52 and Figs. 7 & 18). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Teruhi et al in the system of Ebata et al .The method of Ebata et al can be implemented on any type of method wherein the assuming unit includes a port mapping table which correlates at least one port of the base node with one virtual port, and a

forwarding data base which registers at least one the virtual port in forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination which is taught by Teruhi et al with a motivation in order to provide a data transmission control suitable for use to avoid network load concentration, transmission delay fluctuations due to traffic congestion.

Regarding claim89 Ebata et al disclose three or more nodes as a base as one virtual port (Fig. 1 shows more than three base nodes 11-15 in the network)
Ebata et al disclose all the subject matter of the claimed invention with exception of a computer including a network interface card having the function of communicating with each other through a plurality of communication media each formed of at least one relay node in a communication system, wherein
the network interface card includes an assuming unit which handles a plurality of ports connected to the plurality of communication media among ports belonging to the network interface card to assume the plurality of communication media to be one node.
Teruhi et al from the same or similar field of endeavor teach a computer including a network interface card (FIG. 20 illustrates an example of the construction of the data transmission unit, which is basically similar to common computers. The data transmission unit comprises CPU (Central Processing Unit) 11A, a RAM (Random Access Memory) 11B, a hard disk 11C as a large-capacity storage, a display 11E,and a network interface card 11D connected to the edge router 21 see [0160] lines 1-9 ) having the function of communicating with each other through a plurality of communication media each formed of at least one relay node in a communication

system (the data transmission control method according to the present invention. FIG. 2 is a diagram showing connections of a multimedia data delivery system using the RTP/RTCP scheme between source and destination nodes in the network architecture of FIG. 1 see [0040] lines 1-7), wherein

the network interface card (Fig. 20 shows a network interface card 11 D ) includes an assuming unit which handles a plurality of ports connected to the plurality of communication media among ports belonging to the network interface card (Fig. 20 shows a network interface card 11 D ) to assume the plurality of communication media to be one node (the transmission unit, which sets up multiple communication routes from the source node see [0012] and FIG. 19B is a flowchart showing the procedure by which the destination node obtains information from the sender report see [0035]). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Teruhi et al in the system of Ebata et al .The method of Ebata et al can be implemented on any type of method a computer including a network interface card having the function of communicating with each other through a plurality of communication media each formed of at least one relay node in a communication system, wherein

the network interface card includes an assuming unit which handles a plurality of ports connected to the plurality of communication media among ports belonging to the network interface card to assume the plurality of communication media to be one node which is taught by Teruhi et al with a motivation in order to provide a data transmission control suitable for use to avoid network load concentration, transmission delay

fluctuations due to traffic congestion.

Regarding claim90 Ebata et al disclose all the subject matter of the claim invention with the exception of the computer, wherein the assuming unit of the network interface card includes a forwarding data base which registers, for one destination, a plurality of pieces of forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination. Teruhi et al from the same or similar field of endeavor teach the computer, wherein the assuming unit of the network interface card (FIG. 20 illustrates an example of the construction of the data transmission unit, which is basically similar to common computers. The data transmission unit comprises CPU (Central Processing Unit) 11A, a RAM (Random Access Memory) 11B, a hard disk 11C as a large-capacity storage, a display 11E,and a network interface card 11D connected to the edge router 21 see [0160] lines 1-9 ) includes a forwarding data base which registers, for one destination, a plurality of pieces of forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination (the transmission unit, which sets up multiple communication routes from the source node see [0012], also it is possible to specify port numbers by the UDP destination port number 52 in FIG. 7 according to the application used so that the router 21 outputs packets to the specified ports according to the individual destination port numbers 52 and Figs. 7 & 18).

Regarding claim91 Ebata et al disclose all the subject matter of the claim invention with the exception of the computer, wherein the assuming unit of the network interface card includes a port mapping table which correlates at least one port with one virtual

port, and a forwarding data base which registers at least one the virtual port in forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination. Teruhi et al from the same or similar field of endeavor teach the computer (FIG. 20 illustrates an example of the construction of the data transmission unit, which is basically similar to common computers. The data transmission unit comprises CPU (Central Processing Unit) 11A, a RAM (Random Access Memory) 11B, a hard disk 11C as a large-capacity storage, a display 11E,and a network interface card 11D connected to the edge router 21 see [0160] lines 1-9 ), wherein the assuming unit of the network interface card (Fig. 20 shows a network interface card 11 D ) includes a port mapping table which correlates at least one port with one virtual port (the destination node processes the received packets, regarding a set of multiple routes as a single virtual route. The route information thus obtained is inserted in RTCP-RR together with LSR and DLSR and sent to the source node in step S2, see [0087] ), and a forwarding data base which registers at least one the virtual port in forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination (the transmission unit, which sets up multiple communication routes from the source node see [0012], also it is possible to specify port numbers by the UDP destination port number 52 in FIG. 7 according to the application used so that the router 21 outputs packets to the specified ports according to the individual destination port numbers 52 and Figs. 7 & 18).

3. Claims 66-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abdollahi et al (US 20030035425 A1) in view of Teruhi et al (20030072269 A1).

Regarding claim66 Abdollahi et al disclose a communication control program executed on a node as a base communicating with each other (The manager node 212 may be implemented as a PC compatible computer on which is installed suitable software for achieving the functions according to the present invention. FIG. 3 shows a manager node according to an embodiment of the present invention. Illustratively, the manager node is implemented as a PC compatible computer 300 see [0058] lines 1-5) each of three or more nodes as a base as one virtual port (A plurality of nodes is divided into one or more groups, including the particular group. The manager node transmits the particular packet to one or more nodes, including the particular group of nodes see [0031] lines 10-13 and Fig. 7).

Abdollahi et al disclose all the subject matter of the claimed invention with exception to through a plurality of communication media each formed of at least one relay node in a communication system, which comprises

an assuming function of assuming the plurality of communication media to be one node by handling a plurality of ports connected to the plurality of communication media among ports belonging to. Teruhi et al from the same or similar field of endeavor teach through a plurality of communication media each formed of at least one relay node (The data transmission control method according to the present invention which is used at the source node on the network to send therefrom data to the destination node see

[0009] lines 1-3 also FIG. 2 is a diagram showing connections of a multimedia data delivery system using the RTP/RTCP scheme between source and destination nodes see [0040] lines 3-4) in a communication system, which comprises an assuming function of assuming the plurality of communication media to be one node by handling a plurality of ports connected to the plurality of communication media among ports belonging to (The data transmission control method according to the present invention which is used at the source node on the network to send therefrom data to the destination node see [0009] lines 1-3 also FIG. 2 is a diagram showing connections of a multimedia data delivery system using the RTP/RTCP scheme between source and destination nodes see [0040] lines 3-4). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Teruhi et al in the system of Abdollahi et al.The method of Abdollahi et al can be implemented on any type of method a plurality of communication media each formed of at least one relay node in a communication system, which comprises an assuming function of assuming the plurality of communication media to be one node by handling a plurality of ports connected to the plurality of communication media among ports belonging to which is taught by Teruhi et al with a motivation in order to provide a data transmission control suitable for use to avoid network load concentration, transmission delay fluctuations due to traffic congestion.

Regarding claim67 note that Abdollahi et al disclose the communication control program (The manager node 212 may be implemented as a PC compatible computer

on which is installed suitable software for achieving the functions according to the present invention. FIG. 3 shows a manager node according to an embodiment of the present invention. Illustratively, the manager node is implemented as a PC compatible computer 300 see [0058] lines 1-5), which comprises the function of registering, for one destination, a plurality of pieces of forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination in a forwarding data base (the manager node 212 determines sets of certain parameters (i.e., enable and configuration controls) needed for the transmission. In the case of group communication, in step S206, the manager node 212 determines (via, e.g., internal records) if a session is currently open for the specified group/subgroup of router nodes 230 that is to receive the controls see [0111] lines 1-5 also the manager node does the following for each given node of the group. The manager node transmits a packet containing a network layer header, including an address corresponding to the given node see [0033] lines 7-10).

Regarding claim68 note that Abdollahi et al disclose the communication control program (The manager node 212 may be implemented as a PC compatible computer on which is installed suitable software for achieving the functions according to the present invention. FIG. 3 shows a manager node according to an embodiment of the present invention. Illustratively, the manager node is implemented as a PC compatible computer 300 see [0058] lines 1-5), which comprises the function of correlating at least one port of the base node with one virtual port in a port mapping table (the manager node 212 stores a table of defined groups/subgroups and session identifiers associated

with them see [0111]), and registering at least one the virtual port in forwarding information for transferring a data frame transmitted from a certain transmission source to a predetermined destination in a forwarding data base (the manager node 212 determines sets of certain parameters (i.e., enable and configuration controls) needed for the transmission. In the case of group communication, in step S206, the manager node 212 determines (via, e.g., internal records) if a session is currently open for the specified group/subgroup of router nodes 230 that is to receive the controls see [0111] lines 1-5 also the manager node does the following for each given node of the group. The manager node transmits a packet containing a network layer header, including an address corresponding to the given node see [0033] lines 7-10).

Regarding claim69 note that Abdollahi et al disclose the communication control program (The manager node 212 may be implemented as a PC compatible computer on which is installed suitable software for achieving the functions according to the present invention. FIG. 3 shows a manager node according to an embodiment of the present invention. Illustratively, the manager node is implemented as a PC compatible computer 300 see [0058] lines 1-5), which comprises the function of, when transmitting a data frame to the communication medium having a different frame format, transmitting the data frame with header information (An IP header includes a source address, which is the IP address of the node that transmitted the packet, and a destination address, which is the address assigned to the node or nodes which are to receive the packet. Destination addresses may be unicast addresses assigned to only a single node or multicast address assigned to a multiple nodes that have subscribed to a multicast

group see [0053] lines 5-10) of the frame format of the communication medium added and when receiving a data frame from the communication medium, receiving the data frame with the header information of the frame format of the communication medium removed (the manager node 212 also transmits a command to a given router node 230 to cause the router node 230 to close the session of the group or subgroup from which the router node 230 was removed. Thereafter, the router node 230 will ignore packets containing the above session identifier of the group or subgroup from which it was removed see [0082] lines 6-11).

Regarding claim70 note that Abdollahi et al disclose the communication control program (The manager node 212 may be implemented as a PC compatible computer on which is installed suitable software for achieving the functions according to the present invention. FIG. 3 shows a manager node according to an embodiment of the present invention. Illustratively, the manager node is implemented as a PC compatible computer 300 see [0058] lines 1-5), which comprises the function of transmitting and receiving a keep alive frame to/from each other to obtain a communication state of the communication system (In step S212, the manager node 212 illustratively periodically transmits an SMMP "keep-alive" message for each open session to the respective router node 230 or group/subgroup of router nodes 230 corresponding to the message. Such SMMP keep-alive messages are carried in SMMP packets as noted above see [0112] lines 1-4))

Regarding claim71 Abdollahi et al disclose the communication control program (The manager node 212 may be implemented as a PC compatible computer on which is

installed suitable software for achieving the functions according to the present invention. FIG. 3 shows a manager node according to an embodiment of the present invention. Illustratively, the manager node is implemented as a PC compatible computer 300 see [0058] lines 1-5), wherein the keep alive frame is broadcast , a destination address recognized as unknown (An SMMP keep-alive message causes each router node 230 to which the message is destined, to maintain the session as open and not time out the session. In other words, the keep-alive message causes the router node 230 to reset its internal timer for the session and not close it. If a router node 230 deems a session to have ended due to a time out (i.e., a keep-alive message packet was not timely received), then the router node 230 in the session will purge all commands stored in memory and stop receiving messages for that session see [0112]).

Abdollahi et al disclose all the subject matter of the claimed invention with the exception of by the relay node forming the plurality of communication media with by the relay node forming the plurality of communication media recited. Teruhi et al from the same or similar field of endeavor teach by the relay node (The data transmission control method according to the present invention which is used at the source node on the network to send therefrom data to the destination node see [0009] lines 1-3 also FIG. 2 is a diagram showing connections of a multimedia data delivery system using the RTP/RTCP scheme between source and destination nodes see [0040] lines 3-4) forming the plurality of communication media with by the relay node forming the plurality of communication media recited (the transmission unit, which sets up multiple communication routes from the source node to the destination node on the network and

distributes and sends data, comprises: means for obtaining quality information on the multiple routes from the destination node; and distribution control means for adaptively changing data distribution ratios for the multiple routes on the basis of their quality information obtained by the quality information obtaining means see [0012] lines 1-7).

Thus it would have been obvious to one of ordinary skill in the art to implement the method of Teruhi et al in the system of Abdollahi et al.The method of Abdollahi et al can be implemented on any type of method by the relay node forming the plurality of communication media with by the relay node forming the plurality of communication media recited which is taught by Teruhi et al with a motivation in order to provide a data transmission control suitable for use to avoid network load concentration, transmission delay fluctuations due to traffic congestion.

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(US 20040082341 A1), (Stanforth) discloses, System and method for determining relative positioning in ad-hoc networks.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHALID ABDALLA whose telephone number is (571)270-7526. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on 571-272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. A./

Examiner, Art Unit 2419

/DANG T TON/

Supervisory Patent Examiner, Art Unit 2419/D. T. T./

Supervisory Patent Examiner, Art Unit 2419